# Quarterly Industry Update

As of June 30, 2016 Industry: Oncology Pharmaceutical

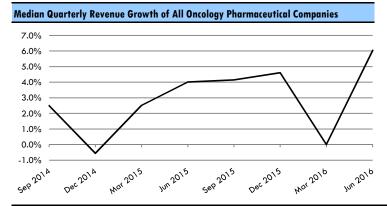


### Industry Summary

Cogent Valuation identified Oncology Pharmaceutical publicly traded companies, IPOs, and recent M&A transactions within the Oncology Pharmaceutical industry, which provides a basis for market and transaction pricing that can be used by your firm in estimating market sentiment and its impact on your firm's value. Over the last year since June 30, 2015, the median 52-week share price return of the Oncology Pharmaceutical industry was -28.0%. Between June 30, 2014 and June 30, 2016, the median EV/EBITDA multiple decreased from 13.8 to 12.0. Furthermore, the median price-to-earnings multiple decreased from 27.2 to 20.4 over the same period.

Comparable Public Company Key Statist	ics										
Median 52-Week Return	-28.0%	Median EV/Revenue Multiple				3.4x	M	20.4x			
Median 3-Year CAGR Return	4.8%	Median EV/EBITDA Multiple			12.0x	M	ultiple	14.6x			
Comparable Public Company Market Price Returns As of June 30, 2016											
	YTD	3 Month	1 Year	2 Year	3 Year	5 Year	2015	2014	2013	2012	2011
Affimed N.V.	-65.2%	-33.7%	-81.6%	N/A	N/A	N/A	14.8%	N/A	N/A	N/A	N/A
Ariad Pharmaceuticals Inc.	18.2%	15.6%	-10.6%	7.7%	-25.0%	-8.2%	-9.0%	0.7%	-64.4%	56.6%	140.2%
Bellicum Pharmaceuticals, Inc.	-36.1%	38.6%	- <b>39</b> .1%	N/A	N/A	N/A	-12.0%	N/A	N/A	N/A	N/A
Calithera Biosciences, Inc.	-51.6%	-34.7%	-48.0%	N/A	N/A	N/A	- <b>62</b> .1%	N/A	N/A	N/A	N/A
Globelmmune Inc.	-49.9%	-7.2%	-25.7%	N/A	N/A	N/A	-49.0%	N/A	N/A	N/A	N/A
Incyte Corporation	-26.3%	10.4%	-23.3%	19.0%	53.8%	33.4%	48.3%	44.4%	204.8%	10.7%	-9.4%
Kite Pharma, Inc.	-18.9%	8.9%	-18.0%	31.5%	N/A	N/A	6.8%	N/A	N/A	N/A	N/A
Loxo Oncology, Inc.	-18.5%	-15.2%	28.6%	N/A	N/A	N/A	142.1%	N/A	N/A	N/A	N/A
Luye Pharma Group Ltd.	-41.3%	-20.8%	-42.8%	N/A	N/A	N/A	-1 <b>9</b> .1%	N/A	N/A	N/A	N/A
Merrimack Pharmaceuticals, Inc.	-31.8%	-35.6%	-56.4%	-14.0%	-7.2%	N/A	-30.1%	112.0%	-12.5%	N/A	N/A
Nektar Therapeutics	-15.5%	3.5%	13.7%	5.4%	7.2%	14.4%	8.7%	36.6%	53.2%	32.4%	-56.5%
SciClone Pharmaceuticals, Inc.	42.0%	18.7%	33.0%	57. <b>6</b> %	38.1%	16.7%	5.0%	73.8%	16.9%	0.5%	2.6%
Seattle Genetics, Inc.	-10.0%	15.2%	-16.5%	2.8%	8.7%	14.5%	39.7%	-19.5%	72.2%	38.6%	11.8%
Sequenom Inc.	-44.3%	-35.2%	-69.9%	-51.4%	-39.9%	-34.5%	-55.7%	58.1%	-50.3%	5.8%	-44.6%
Spectrum Pharmaceuticals, Inc.	9.0%	3.3%	-3.9%	-10.1%	-4.1%	-6.6%	-13.0%	-21.7%	-20.9%	-23.5%	113.0%
Sucampo Pharmaceuticals, Inc.	-36.6%	0.4%	-33.2%	26.1%	18.6%	21.8%	21.1%	51. <b>9</b> %	91.8%	10.6%	15.4%
Tokai Pharmaceuticals, Inc.	-36.8%	-1.8%	-58.6%	N/A	N/A	N/A	-40.8%	N/A	N/A	N/A	N/A
Vertex Pharmaceuticals Incorporated	-31.6%	8.2%	-30.3%	-4.7%	2.4%	10.6%	5.9%	59.9%	77.3%	26.2%	-5.2%
Median of Industry Public Companies	-31.7%	1.8%	-28.0%	5.4%	4.8%	14.4%	-2.0%	48.2%	35.1%	10.7%	2.6%

(Multiple year periods are calculated as the average annual return.)



### Median Public Company Multiples of the Oncology Pharmaceutical Industry

80.0% -								
60.0%								
40.0%								
20.0%								
0.0% H						+	+	
20.0%					-			
40.0%								
60.0%								
1 <sup>un</sup> 2 <sup>014</sup>	~01A	~01A	2015	~0 <sup>1</sup>	, or	5 ,01	5 Nor 2016	20 Jun 20
wn 20.	C 82 20.	Cec 20.	Nor 20.	un 20.	Cep 20.	Cec 20.	. or 20.	1. Jun 21

Date:	6/30/2014	9/30/2014	12/31/2014	3/31/2015	6/30/2015	9/30/2015	12/31/2015	3/31/2016	6/30/2016
EV/Revenues Multiple	3.2x	2.8x	2.8x	6.1x	5.3x	4.8x	5.0x	5.2x	3.4x
EV/EBITDA Multiple	13.8x	14.7x	10.0x	18.2x	18.0x	17.5x	13.2x	10.6x	12.0x
Price/Earnings Multiple	27.2x	15.7x	20.5x	52.2x	29.4x	23.5x	23.0x	18.5x	20.4x
EV/Gross Cash Flows Multiple	18.1x	27.5x	15.5x	42.0x	24.5x	20.4x	18.4x	15.1x	14.6x

This industry research is provided at no charge to Cogent Valuation's clients. Research or detailed information not covered in this report can be obtained for a fee. Contact Steven Kam at 415-392-0888 for additional information or questions in connection with this research report. Copyright © 2016 Cogent Valuation. All Rights Reserved.

## **Quarterly Industry Update**

As of June 30, 2016 Industry: Oncology Pharmaceutical



#### Industry Initial Public Offerings (dollars in millions, except share prices)

<u>Offer Date</u> 5/18/2016	<u>Company Name</u> Merus B.V.	<u>Offer Price</u> \$10.00	<u>Shares Offered</u> 5.5	<u>Amount Raised</u> \$55.0	<u>Total Assets</u> \$38.5	<u>Debt</u> \$0.7	LTM Revenues \$2.1	<u>LTM EBITDA</u> (\$20.0)	<u>LTM Net Income</u> (\$25.2)	<u>LTM Cash Flows</u> (\$19.9)
5/12/2016	Oncobiologics, Inc.	\$6.00	5.8	\$35.0	\$31.3	\$15.5	\$3.3	(\$56.6)	(\$59.4)	(\$54.4)
3/22/2016	Corvus Pharmaceuticals, Inc.	\$15.00	4.7	\$70.5	\$98.5	\$0.0	\$0.0	(\$13.6)	(\$31.3)	(\$13.5)
3/2/2016	Syndax Pharmaceuticals, Inc.	\$12.00	4.4	\$52.8	\$89.9	\$0.0	\$0.6	(\$14.9)	(\$24.1)	(\$14.9)
2/2/2016	BeiGene, Ltd.	\$24.00	6.6	\$158.4	\$135.6	\$20.6	\$5.5	(\$35.3)	(\$33.6)	(\$33.8)
10/7/2015	CytomX Therapeutics, Inc.	\$12.00	6.7	\$80.0	\$134.1	\$2.3	\$7.6	(\$17.5)	(\$20.4)	(\$16.6)
9/30/2015	Mirna Therapeutics, Inc.	\$7.00	6.3	\$43.8	\$42.2	\$0.0	\$0.0	(\$17.8)	(\$19.8)	(\$17.8)
Median of A	ll IPOs	nm	nm	\$55.0	\$89.9	<b>\$0.7</b>	\$2.1	(\$17.8)	(\$25.2)	(\$17.8)

nm: not meaningful, N/A: not applicable

### Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions)

Transaction Date	<u>Target</u>	<u>Acquirer</u>	Transaction Size	<u>% Bought</u>	LTM Revenues	<u>EV/Revenues</u>	Size of M&A Transactions
6/3/2016	Baxalta Incorporated	Shire plc	\$36,219.9	100%	\$6,148.0	5.7x	9
12/4/2015	DARA BioSciences, Inc.	Midatech Pharma Plc	\$30.7	100%	\$2.4	8.8x	
10/7/2015	AstraZeneca PLC, Caprelsa	Genzyme Corporation	\$300.0	100%	\$48.0	6.3x	·•• 7
7/23/2015	Sigma-Tav Pharma	Baxter International Inc.	\$900.0	100%	\$100.0	9.0x	
5/26/2015	Pharmacyclics, Inc.	AbbVie Inc.	\$19,950.0	100%	\$816.1	23.4x	
3/20/2015	EUSA Pharma, Inc.	Essex Woodlands Health	\$34.0	100%	\$27.0	1.3x	Number     1       0     0       1     0       2     0       3     0       4     0       3     0       4     0       3     0       4     0       1     0       2     0       3     0
2/28/2014	Paladin Labs Inc.	Endo International plc	\$1,777.9	100%	\$263.0	5.8x	<b>z</b>
12/4/2013	Agila Specialties Private	Mylan, Inc.	\$1,850.0	100%	\$255.0	7.3x	
10/24/2013	Optimer Pharmaceuticals	Cubist Pharmaceuticals	\$773.8	100%	\$76.9	9.1x	2 <sup>5,15</sup> 100 150 100 100
9/2/2013	Open Stock Company	LLC Garden Hills	\$215.6	52%	\$142.4	2.4x	2525 100 250 100 75 100 7515 75100 250 100 75 100
7/16/2013	Cipla Medpro	Cipla Limited	\$538.5	100%	\$259.6	2.0x	7 7 7 2
6/12/2012	EUSA Pharma, Inc.	Jazz Pharmaceuticals	\$700.0	100%	\$95.0	7.4x	LTM Revenues Reported
1/23/2012	Ascent Pharmahealth Ltd	Watson Pharmaceuticals	\$392.7	100%	\$157.1	2.5x	8 • 7
12/22/2011	Lundbeck Inc.	Oak Pharmaceuticals Inc.	\$60.0	100%	\$34.8	1.7x	V V   6 V   5 V   4 V   3 V   2 V   1 V
4/7/2011	Laboratorio Quimico	Amgen Inc.	\$215.0	100%	\$80.0	2.7x	
10/15/2010	Abraxis BioScience, Inc.	Celgene Corporation	\$3,659.6	100%	\$447.5	7.8x	
6/7/2010	OSI Pharmaceuticals Inc.	Astellas US Holding, Inc.	\$3,946.4	100%	\$441.0	7.7x	
1/29/2010	Enzon Pharmaceuticals Inc.	Sigma-Tau Pharmaceuticals	\$330.0	100%	\$135.2	2.4x	-
3/18/2009	Indevus Pharmaceuticals	Endo International plc	\$825.5	100%	\$87.8	8.0x	
12/15/2008	Amgen Inc.	Biovitrum AB	\$150.3	100%	\$70.0	2.1x	0 <sup>2</sup> <sup>50</sup> 7 <sup>50</sup> 7 <sup>50</sup> 7 <sup>50</sup> 7 <sup>50</sup>
Median of the	20 M&A Transaction Targe	ts	\$619.2	100%	\$117.6	6.0x	7 7 7 7

#### Definitions of Financial Terms Used in this Quarterly Industry Update:

Enterprise Value (EV): Market Value of Equity + Market Value of Debt - Cash

Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA): Profitability metric sometimes also referred to as operating profit or operating earnings.

Gross Cash Flows: Net Income + Depreciation and Amortization Expense

Latest Twelve Months (LTM): Financial information is as of the latest twelve months through the date of this Quarterly Industry Update.

**Disclosures and Limitations:** This research report is for informational and discussion purposes only. Information presented herein is not investment advice of any kind to any person and does not constitute a recommendation as to the purchase or sale of any interests or as to any other course of action. General, financial, and statistical information concerning the details of this report and related industry are from sources Cogent Valuation believes to be reliable. Cogent Valuation has accurately reflected such information in this research report; however, Cogent Valuation makes no representation as to the sources' accuracy or completeness and has accepted this information without further verification. Neither all nor any part of the content of this report may be conveyed to the public through advertising, public relations, news, sales, mail, direct transmittal, or other media without the prior written consent of Cogent Valuation. Cogent Valuation's research is as of the date reported herein. Cogent Valuation has no affiliation with any of the companies comprising the industry used as a basis for research in this report, nor does Cogent Valuation hold any investments in the companies listed herein. The content of this report IS NOT TO BE USED OR CONSIDERED UNDER ANY CIRCUMSTANCE BY ANYONE AS INVESTMENT ADVICE. This industry research is provided at no charge to Cogent Valuation's clients. Research or detailed information not covered in this report can be obtained for a fee. Contact Steven Kam at 415-392-0888 for additional information or questions in connection with this research report. Copyright © 2016 Cogent Valuation. All Rights Reserved.